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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/756,648	01/03/2001	Raymond T. Hebert	M-10970 US	6710

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EXAMINER

NGUYEN, JENNIFER T

ART UNIT PAPER NUMBER

2674

DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/756,648

Applicant(s)

HEBERT ET AL.

Examiner

Jennifer T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-93 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. Claim 6 is objected to because of the following informalities: claim 6 is depended on itself. Appropriate correction is required.

#### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-93 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-78 of U.S. Patent No. 6,101,038 (Hebert et al.).

Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences between claims in the application and the patent are a transceiver module, four groups of light-emitting diodes, and a prismatic dispersion plate in the collecting lens assembly.

The patent differs from the instant application in that it does not disclose a transceiver module. However, it would have been obvious to obtain a transceiver module in order to transmit and receive the signal between two terminal users.

The patent differs from the instant application in that it does not disclose four groups light-emitting diodes. However, it would have been obvious to obtain four groups of light-

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emitting diodes in order to cancel the electromagnetic field from each other, that minimizes spurious emissions.

The patent differs from the instant application in that it does not disclose a prismatic dispersion plate in the collecting lens assembly. However, it would have been obvious to obtain a prismatic dispersion plate in the collecting lens assembly in order to widen the collecting angle of the assembly.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10, 13, 14, 24-28, 30-41, 44, 45, 53, 54, 61-68, 71, 74-84, 88, and 91-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson et al. (U.S. Patent No. 5,005,213) in view of Fournier et al. (U.S. Patent No. 5,671,158) and further in view of Hebert (U.S. Patent No. 6,008,939).

Regarding claims 1, 35, 61, and 80, referring to Fig. 1, Hanson teaches an apparatus including a video interface for a remote display, comprising: a video processing circuit (22) configured to output a modulated video signal; a remote receiver (28) configured to receive said modulated video signal; and a remote electronic circuit (30) interconnected to said receiver (28) and to a video display device (32), said remote electronic circuit (30) configured to apply said modulated video signal to control and drive said video display device (32) (from col. 4, line 1 to col. 5, line 9).

Hanson differs from claims 1, 35, 61, and 80 in that he does not specifically teach the modulated video signal having a data structure comprising a repetitive sequence of frame times, each said frame time containing substantially equal consecutive field times for each of three color fields, a portion of each said field time containing a burst of pixel luminance and control data; and a transceiver module comprising a cluster of infrared light-emitting diodes coupled to said video processing circuit for transmitting said modulated video signal. However, referring to Fig. 6B, Hebert discloses modulated video signal having a data structure comprising a repetitive sequence of frame times, each said frame time containing substantially equal consecutive field times for each of three color fields, a portion of each said field time containing a burst of pixel luminance and control data (col. 15, lines 25-28, line 64 to col. 16, line 4, and lines 17-52). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the modulated video signal as taught by Hebert in the system of Hanson in order to minimize the amount of flicker perceived by the eye. Moreover, referring to Fig. 1, Fournier discloses a transceiver module (28, 44) coupled to said video processing circuit (16) for transmitting said modulated video signal (from col. 7, line 66 to col. 8, line 17). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to incorporate the transceiver module as taught by Fournier in the system of Hanson in order to connect and transmit the signal to the remote display. Additionally, it would have been obvious to obtain a transceiver module comprising a cluster of infrared light-emitting diodes (cited by Applicant, specification page 8) in order to avoid the high power density of the laser diode and minimizes the possibility of total blockage of the signal path to the headset.

Regarding claims 2, 5, 62, and 64, Hanson further teaches modulated video signal is transmitted from said video processing circuit to said receiver at least in part on a modulated beam of electromagnetic energy (col. 11, lines 30-33).

Regarding claims 3, 6, 10, 36, 37, 41, 63, 65, 81, and 82, the combination of Hanson, Fournier, and Hebert teaches said modulated beam of electromagnetic energy is an infrared beam having a wavelength in a range of approximately 700 nm to approximately 1100 nm (col. 5, lines 47-66 of Fournier).

Regarding claim 4, it would have been obvious to obtain an optical fiber connecting said video processing circuit to said receiver, said modulated beam of electromagnetic energy propagating through said optical fiber in order to provide connection from the base station to the remote station.

Regarding claims 7-9 and 38-40, it would have been obvious to obtain the cluster of light-emitting diodes is driven by a common modulated electrical source in order to simplify circuitry, reduce weight and cost of the whole system.

Regarding claims 13, 38, and 44, the combination of Hanson, Fournier, and Hebert differs from claims 13, 38, and 44 in that it does not specifically teach the cluster of light emitting diodes is interconnected with said video processing circuit through electrical cables. However, it would have been obvious to obtain a cluster of light emitting diodes is interconnected with said video processing circuit through electrical cables in order to connect the input video signal to the processing circuit.

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Regarding claim 14, 26, and 45, the combination of Hanson, Fournier, and Hebert teaches the cluster of light emitting diodes is interconnected with said video processing circuit through a coaxial cable (col. 11, lines 30-31 of Hanson).

Regarding claims 24, 61, and 91, the combination of Hanson, Fournier, and Hebert teaches a headset (14) to be worn by a user (34), said headset incorporating said receiver (28) and said video display device (32) (Fig. 1 of Hanson).

Regarding claims 25-27, it would have been obvious to obtain a tether interconnecting said video processing circuit and said transceiver, such that said modulated video signal is transmitted through said tether in order to provide connection from the base station to the remote station.

Regarding claims 28 and 75, the combination of Hanson, Fournier, and Hebert teaches remote electronic circuit is configured to illuminate said video display device sequentially with light from colored light emitting diodes in synchronism with said bursts of pixel luminance data, such that illumination occurs during a portion of each said field time not containing said burst (Fig. 6B of Hebert).

Regarding claim 30, the combination of Hanson, Fournier, and Hebert teaches field time is in a range of approximately 4 msec to approximately 6 msec (col. 15, lines 25-30 of Hebert).

Regarding claims 31 and 32, it would have been obvious to obtain a bandwidth of the order of or greater than 100 MHz in order to provide a high resolution image.

Regarding claims 33, 53, 78 and 92, the combination of Hanson, Fournier, and Hebert teaches said modulated video signal incorporates an embedded audio signal (Fig. 1 of Fournier).

Regarding claims 34, 54, 79 and 93, the combination of Hanson, Fournier, and Hebert teaches a return audio link-configured to propagate a return audio modulated signal from the proximity of said remote receiver to the proximity of said video processing circuit (Fig. 1 of Fournier).

6. Claims 15-23, 46-52, 55-60, 69, 70, 72, 73, 85-87, 89, and 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanson et al. (U.S. Patent No. 5,005,213) and Fournier et al. (U.S. Patent No. 5,671,158) in view of Hebert (U.S. Patent No. 6,008,939) and further in view of Gramann et al. (U.S. Patent No. 6,028,708).

Regarding claims 15, 16, 20, 22, 46, 47, 49, 51, 55, 60, 68, 69, 73, 85, 86, and 90 the combination of Hanson, Fournier, and Hebert differs from claims 15, 16, 20, 22, 46, 47, 49, 51, 55, 60, 68, 69, 73, 85, 86, and 90 in that it does not specifically teach a collecting lens assembly comprising: a photodetector, an inner light cone having diffusely reflecting outer walls; a wide-angle collecting lens coupled coaxially to said inner light cone; an outer conic cavity disposed coaxially around said wide-angle collecting lens, said outer conic cavity having polished reflective inner walls; and an asymmetrical prismatic pattern for widening a collecting angle of said assembly asymmetrically. However, referring to Figs. 3 and 4, Gramann discloses a collecting lens assembly (8) comprising: a photodetector (3), an inner light cone having diffusely reflecting outer walls; a wide-angle collecting lens (8) coupled coaxially to said inner light cone; an outer conic cavity disposed coaxially around said wide-angle collecting lens (8), said outer conic cavity having polished reflective inner walls; and an asymmetrical prismatic pattern (14) for widening a collecting angle of said assembly asymmetrically (col. 8, lines 1-67 and col. 9, line 1-7). Therefore, it would have been obvious to a person having ordinary skill in the art at the



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time the invention was made to incorporate the collecting lens assembly as taught by Gramann in the system of Hanson, Fournier, and Hebert in order to allow to use of a smaller, wider bandwidth, less expensive photodetector to collect sufficient levels of infrared signal.

Regarding claims 17, 48, 70 and 87, the combination of Hanson, Fournier, Hebert and Gramann teaches wide angle collecting lens is aspheric (Figs. 3 and 4 of Gramann).

Regarding claims 18, 19, 57, and 58, it would have been obvious to obtain the wide angle collecting lens is made of an optically transmitting polymeric material in order to provide high quality optical signal.

Regarding claims 21, 50, 72, and 89, it would have been obvious to obtain the prismatic dispersion plate overlies said outer conic cavity in order to widen the collecting angle of the assembly.

Regarding claims 23 and 59, the combination of Hanson, Fournier, Hebert and Gramann teaches wide angle collecting lens and said inner light cone are an integrated monolithic structure (Figs. 3 and 4 of Gramann).

Regarding claims 52, 56, the combination of Hanson, Fournier, Hebert and Gramann teaches a headset (14) to be worn by a user (34), said headset incorporating said receiver (28) and said video display device (32) (Fig. 1 of Hanson).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Heckman (U.S. Patent No. 3,674,925) teaches cable-less television system.

Luber et al. (U.S. Patent No. 6,430,433) teaches apparatus for image-supported treatment of a work object.

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Ruda et al. (U.S. Patent No. 5,745,519) teaches laser diode system.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**.

The examiner can normally be reached on Mon-Fri from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reach at **703-305-4709**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

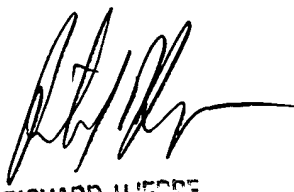
Washington, DC. 20231

**Or faxed to: 703-872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

Jennifer T. Nguyen  
Patent Examiner  
Art Unit 2674

  
RICHARD HJERPE  
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